CHAPTER IX—PUBLIC HEALTH AND MEDICAL SERVICES.

(Calendar Year 1957.)

(i) Public Health Administration.

1265. Mysore State is known to be a poineering State in the field of Public Health activities. There were 235 full-fledged Health Units with 32 modified Health Units, 20 Combined Hospitals, one Central Leprosarium under the control of the Public Health Department during the year. In addition, there were 25 Secondary Centres, one Health Training Centre at Ramanagaram, ten Urban and eight Rural Family Planning Centres, three Family Planning Teaching Centres, two Leprosy Clinics, and District Laboratories at Shimoga, Mysore, Coorg, Mandya, Hassan, Chickmagalur and Raichur.

1266. For purposes of administrative convenience, the work of the Department is divided into Bureaus—the Bureau of Administration, Bureau of Vital Statistics (since abolished), Bureau of Malariology, Bureau of Epidemiology, Bureau of Health Education and Bureau of Laboratories comprising the Public Health Institute, Bangalore, the Vaccine Institute, Bangalore and the Vaccine Institute, Belgaum. The Drug Act was brought into force during the year and the Director of Public Health was appointed as the Drug Controller. A Family Planning Officer for the State has also been appointed.

1267. In the old Mysore area, the Primary Health Centres were under the supervisory control of Secondary Health Centres.

1268. The Secondary Health Centres control 5 to 7 Primary Centres. Each Primary Centre covers a population of 5,000 to 8,000 in Malnad and 15,000 to 20,000 in Maidan. Primary Health Centres of the Government of India type were sanctioned for the old and new Mysore areas. These were also existing in the integrated areas. These Health Units cover a population of 60,000.

1269. *Audio Visual Unit.*—The Uuit was on tour for 8 days during the year, covering a distance of 4,370 miles gave 110 shows screening 513 films to an approximate

Bureau of Health Education

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audience of 46,257. There was increased demand for imparting "Health Education" by means of Audio-visual aid.

1270. As usual, the Unit participated in a number of jatras during the year, for educating the public in health practice and during the evenings films were screened on health subjects including topical news items from information films.

1271. The expenditure of the Bureau of Health Education during the year was Rs. 26,144.03.

1272. The expansion of the Bureau of Health Education with the assistance and grant from the Government of India was under active consideration for implementation.

Bureau of Laboratories.

1273. *Public Health Institute.*—A total number of 1,910 (420) cases with 6,074 (2,035) articles of blood stains, seminal stains, human poisoning cases under Prohibition Act and other miscellaneous cases were examined during the year.

1274. Arsenic and Zinc Phosphide (particularly from Coorg), Parathion and D.D.T. were found to be frequently encountered poison during the year. Cases of Arsenic poisoning were found to be common particularly in Coorg. Poisoning by D.D.T. resulting in death were very rare. Poisoning by Parathion was, for the first time, encountered in laboratory only last year. Half a dozen cases of Parathion poisoning were detected during the year. Cases of Zinc Phosphide poisoning were on the increase. More than half a dozen cases of Zinc poison (rat poison) were reported during the year.

1275. During the year, a total number of 2,352 (1,220) samples were received and analysed.

1276. The Institute undertook Serological tests for Syphilis, Serological diagnosis of Enteric Fevers, examination of samples for Typhus, Agglutination test for Brucellosis, cultural examination of blood, urine, stool, etc., microscopic examination of blood, sputum etc., biochemical and baematological examination of blood, urine and preparation of T.A.B. Prophylactic vaccine, T.A.B., Therapeuit[illegible] vaccine, Cholera vaccine, Plague vaccine and Autogen[illegible] vaccine.

1277. The Institute also prepared and issued various kinds of stains and reagents, media and solutions for use in the Public Health Institute and other institutions under the Public Health Department.

1278. The number of albinomice at the end of the year was 373. The number of animals used for testing the virulence, potency of plague vaccine prepared in this institute and other tests was 139.

1279. This institute undertook the bacteriological and serological tests in the investigation of the continuous fevers in Soraba area.

1280. The expenditure of the Public Health Institute during the year was Rs. 28,730-52.

Vaccine Institute, Bangalore

1281. Eighteen (14) buffalo calves and nil (2) cow calves remained on 1st January 1957 and 50 (12) buffalo calves and 6 (6) cow calves were purchased making in all 68(12) buffalo calves and 6 (6) cow calves during the year. All the calves after vaccination and collection of pulp were sold as "done calves". Of these, 59 (72) buffalo calves and 6(8) cow calves were vaccinated during the year. Quantity of pulp collected from buffalo calves was 28,840 (30,869) grains and from cow calves 1,355 (435) grains which would come to 3,60,500 doses concentrated vaccine lymph which according to present rate of dilution would be about 36,05,000 million cases. The material from cow calf was used as seed lymph for vaccinating the buffalo calves.

1282. Streptomycin technique was continued to be used for the preparation of the issue vaccine lymph during the year.

1283. Samples of purified and bacteriologically tested lymph were tried on 1,656 (1,399) children at the model range villages and all the samples gave 100 per cent success.

1284. At the institute, 5,394 (1,333) vaccinations were conducted out of which 921 were primary and 4,473 re-vaccinations.

1285. A total quantity of lymph enough for 27,82,670 doses were issued during the year. This included the supply of 2·5 lakhs doses made to the Director, King Institute, Guindy, Madras, under requisition and 34,100 (con.) doses supplied to the Assistant Director of Public Health, Vaccine Institute, Belgaum. The supply of lymph

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to Madras has brought an extra income of Rs. 15,000 to the institute.

1286. The demand for vaccine lymph from all the districts of the State were duly complied with during the year.

1287. Usual courses of lecture demonstrations in the vaccination work were delivered to the final M.B.B.S. and final L.M.P. students. In addition; batches of compounders from the Medical Department were given the necessary training. Village level workers of the N.E.S. and Laboratory technicians were also given necessary training.

1288. Influenza virus belonging to Asian 'A' group was isolated in 2 instances. One strain of Asian 'A' virus was isolated from the cerebro spinal fluid-an unusual source. Serological survey on random samples from patients suffering from suspected 'flue' was also made.

1289. Work on the enquiry "Chemotherapy of Virus Infections" under a grant-in-aid by Indian Council of Medical Research was undertaken.

1290. The revenue and expenditure of the Institute were Rs. 2,33,586-28 (Rs. 3,15,163-98) and Rs. 71,121-94 (Rs. 67,696-33) respectively.

Vaccine Institute, Belgaum.

1291. With the balance of 30,73,540 doses on 1st January 1957 a net total of 1,09,51,145 (72,68,190) doses of vaccine lymph were manufactured and 76,69,215 (66,28,485) doses were despatched during the year.

1292. Seed lymph maintained by periodical passage through the rabbit was used for vaccination of sheep with good results both as regards quality of the lymph and the yield.

1293. On 1st January 1957 there were 60 sheep and during the year 2,174 sheep were hired bringing the total number to 2,234, out of which 2,098 sheep were vaccinated. There was no outbreak of any epidemic disease amongst admitted sheep during the year. The average yield of pulp per sheep from which pulp was collected (*i.e.* 1,993) was 30·92 grammes; but the gross average taking the number of sheep vaccinated (*i.e.*, 2,098) will be 29·37 grammes.

1294. The Institute distributed 76,69,215 (66,28,495) doses of vaccine lymph in all during the year.

1295. During the year, 13,60,676 (13,52,990) primary vaccinations were performed with 99·68 (99·69) per cent success rate and 96·81 (95·95) per cent insertion success rates. Re-vaccinations performed numbered to 59,84,035 and the case and insertion success rates were 44·31 and 26·74 per cent respectively.

1296. No research work was carried out during the year.

Bureau of Epidemiology.

1297. *Plague*:—Forty attacks (185) with 15 (50) deaths were reported during the year. Three thousand four hundred and thirty-two anti-plague inoculations were conducted in the infected villages. All the houses in the infected and neighbouring villages were sprayed with DDT or Hexidol for preventing further spread of infection. Except these sporadic cases of plague in Kolar, Bangalore and Mysore districts, the remaining districts of the State remained free from plague.

1298. *Cholera*:—During the year, 4,159 (665) attacks with 1,675 (251) deaths due to cholera were reported from 609 villages and 29 towns. The erstwhile Mysore State has been free from cholera during 1957 except for a few sporadic cases in Bellary, Kolar and Chitradurga districts. This was brought well under control by anti-cholera inoculations.

1299. *Small-pox*:—During the year 3,465 (589) attacks with 1,043 (106) deaths were reported from 433 villages, 42 towns and 6 cities. Small-pox infection was present in every district and city in the State. Specially the incidence was heavy in Bangalore City, Bangalore, Kolar, Chitradurga, Mandya, Mysore, Bijapur, Gulbarga, Bidar and Raichur districts. Prompt action was taken to check the spread of infection by undertaking intensive vaccination programmes. Mass vaccination programmes were undertaken in almost all districts specially in the Health Unit areas of the State.

1300. *Influenza*:—The epidemic of influenza was started in Mysore State during the last week of May 1957. Infection was imported from Singapore through the persons who came by board to Madras and then on to this State. A total of 4,56,756 attacks with 66 deaths were reported due to influenza from all the districts and cities during the year.

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The epidemic was completely brought under control during the month of November 1957.

1301. *Guinea Worm Disease:*—During the year, guinea worm infection was found to be present in three villages in Chitradurga District. The step wells in these villages were stocked with fish as a biological control measure. In the integrated areas guinea worm infection was prevalent extensively. Conversion of step wells in to draw wells was being done slowly by District Boards and Public Works Department.

1302. *Leprosy* :—In the erstwhile Mysore State, Leprosy was endemic only in a few scattered areas-Mysore, Mandya and Kolar districts. It was prevailing in Bombay, Hyderabad and Madras Karnatak areas to a large extent. Two clinics were sanctioned by Government, one at Ron in Dharwar District (recently transferred to Gajendragad) and another at Illekal in Bijapur District during the year. In addition, there were a number of private organisations and institutions which were attending to leprosy patients in the State. Government was giving grants-in-aid to the deserving institutions. In endemic areas where leprosy is prevailing, domiciliary treatment was given through local health units and dispensaries.

1303. In Bangalore, there is a Central Leprosarium with 200 beds which caters to the needs of the entire new Mysore State. At T. Narasipur, Mysore District, Gandhi Memorial Leprosy Foundation has started a Leprosy Clinic. They continued their activities of survey, treatment and research work during the year.

Central Leprosarium, Bangalore.

1304. From the reports received from endemic areas it is seen that 5,189 cases of leprosy had been registered for treatment during the year, and this roughly comes to 103·7 per lakh of population in the State.

1305. In Chamarajanagar Taluk, where leprosy was fairly highly endemic, advantage of the services of Village Level Workers attached to the National Extension Scheme, was being taken for detecting new leprosy cases and listing them and also distributing Avlosulphone tablets to the cases. The village level workers of the said taluk were given a preliminary training at Gandhi Memorial Leprosy Foundation Control Unit at T. Narasipur for 3

days to enable them in detection and typing of cases. If this trial succeeds, similar scheme will be extended to other endemic areas wherever National Extension Service or Community Development Scheme Blocks are functioning.

1306. *Activities of Central Leprosarium, Bangalore*:– The out-patient section registered a total of 6,891 patients for the year, giving a daily average of 19·5. Among these, 4,609 were males, 1,723 females and 459 children.

1307. *In-patients*:–There were 277 patients remaining at the end of 1956, and 383 new patients were admitted during the year giving a daily average admissions of 1·3. Of these, 563 were males and 97 females. Out of 660 in-patients, 25 were discharged with disease arrested, 30 cases improved, 291 discharged otherwise and 290 remained under treatment at the close of the year. To work out the percentage, the percentage of incurables and burnt out cases farm as much as 45 per cent of the total cases. The discharged rate of clinically arrested and improved cases comes to 15 per cent leaving roughly 4 per cent mortality rate and 81 per cent discharged otherwise. The mortality rate either directly due to leprosy or other diseases associated with leprosy works out to 3·6 per cent for the year.

1308. Occupational therapy such as wood work, gardening, tailoring, poultry-keeping, charaka spinning and toy making by such of the able bodied patients, continued as in previous year.

1309. *Income and Expenditure*:–The total expenditure over the institution for the year 1956-57 was Rs. 75,814 out of which the expenditure on establishment was Rs. 14,059 and on diet and contingencies Rs. 61,755. The average cost of diet per patient per day worked out to Rs. 0·66 nP.

1310. During the year, one special eye camp was organised at Hassan in collaboration with the Mysore State Ophthalmological Society. The total number of persons examined was 2,777. **Blind relief work in Rural Areas.**

1311. *UNICEF assistance to M.C.H. Programme*:– The programme started in the year 1951. Up to the end of 1956, a total of 157 M.C.H. centres were working and getting the assistance from UNICEF. During the year 1957, 23 M.C.H. centres were started, thus making a

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total of 190 centres. Replenishment of drugs and diet supplements were made to these centres regularly out of the supplies allotted from UNICEF, New Delhi.

Fair and Festivals.

1312. During the year, 161 cattle fairs and jatras were held in the State. Due to the prevalence of cholera in the integrated districts, compulsory inoculation was taken up in the jatra grounds. There was no outbreak of epidemic disease either during or after the festival.

Hand Flush Latrines.

1313. Hand flush latrines were introduced in the various districts of erstwhile Mysore State, in order to step up the rural health level, in minimising incidence of fly borne diseases in the rural areas. This was found to be most economic way to improve the sanitation of the rural areas and to raise the rural health level. During 1957, Health Inspectors from Bureau of Epidemiology, Ramanagaram and from Sagar were sent to Gulbarga, Dharwar and North Kanara districts to popularise hand flush latrines in the integrated parts.

Bureau of Malariology.

1314. Routine examination of blood smears for malarial parasites, were continued during the year. Out of 10,597 blood smears examined, 380 were found to be positive of which 213 were P. Vivax, 142 were P. Falsiparum, 1 was P. Malariae and 24 were of mixed infection.

1315. Spleen surveys were conducted by the respective unit officers under National Malaria Control Programme.

1316. During the year, two rounds of DDT spraying were carried out with 112 mgms. dosage in all the areas scheduled to be sprayed by DDT. Malaria Surveillance work in both the garden tracts and rice tracts of the North Kanara District was carried out alternately. Dieldrin in different recommended dosages of 25 mgms. and 12·5 mgms. per sq. foot was tried in malnad and maidan areas.

1317. A course of six weeks was given in Malariology for trainees both in theory, practical and field work in Malaria Training Centre at Mandya. So far, 25 batches have been trained.

1818. Malaria control by using larvicides were continued in the urban places.

1319. *National Malaria Control Programme.*—A programme sponsored by Government of India on a Nation-wide basis was implemented in Mysore State during 1953

and continued during the year. There were 14·63 N.M.C. Units including 6·63 N.M.C. Units of integrated areas functioning in the State at the end of the year.

1320. A total quantity of 10,63,719 lbs. of DDT 75 per cent W.P and a total quantity of 17,103·27 lbs. of Dieldrin 50 per cent W.P. was used for spraying during the year, in the erstwhile Mysore.

1321. In the integrated districts 5,79,909·5 lbs. of DDT 75 per cent W.P and 13,606·3 gallons of emulsion concentrate and 22,117 lbs. of DDT 50 per cent W.P. were used for spraying 16,06,867 houses. A total quantity of 69 lbs. of Dieldrin 50 per cent W.P. was used to spray 452 houses in 4 villages.

1322. *Malaria Morbidity*:--A total number of 6,961 cases in malnad and 24,058 cases in maidan districts were clinically diagnosed as malaria in the Health Units during the year as against 14,10,592 total cases in malnad and 12,85,384 total cases in maidan treated for all diseases. The percentage of malaria cases treated works out to 0·49 for malnad and 1·8 for maidan districts. Further, the malaria morbidity during 1957 works out to 7·8 (14·3) for malnad districts and 18·8 (19·5) for maidan districts for every 1,000 population in the Health Unit areas. The overall malaria morbidity for the State works out to 14·3 (17·7) for every 1,000 population.

1323. *Malaria Mortality Rate*:—During the year, the number of deaths due to malaria have been recorded as nil (2) in malnad and 8 (48) in maidan. The overall deaths due to malaria for the State were 8 (50). So, the malaria mortality rate for 1,00,000 population of the State was 0·36 (2·6) in 1957.

1324. *National Filaria Control Programme*:—There was 2/5ths of National Filaria Control Unit at Mangalore. It serves the entire population of Mangalore town. Mass hetrazan therapy which was started during September 1956 was concluded during the last week of February 1957. In all, 80,947 individuals took treatment for one or more days giving a percentage of 69·1 as treated. The range of reactions noticed was wide and varied. In some instances, restlessness was complained of, whereas in others, the drug

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caused drowsiness and deep sleep. Diarrhoea against constipation, high fever against chills were a few instances of the variations of reactions. After this treatment, it was noticed that infection rate from 14·3 has been reduced to 7·7.

1325. The National Society of India for Malaria and other mosquito borne diseases awarded certificate of merit to Mysore N. M. C. Unit.

M. C. H. Project.

1826. The M. C. H. Project continued to function as an Advisory Body in all M. C. H. matters with the collaboration of the W. H. O. and UNICEF, with the object of strengthening and developing the Maternal and Child Health Services in the State. A sum of Rs. 16,258-87 was spent during the year.

Drugs Control Organisation.

1327. The Drugs Act 1940 and the Rules framed thereunder were brought into force from 1st April 1957 in the State. The Director of Public Health was appointed as the Licensing Authority for the grant of licenses for sale and manufacture of drugs in the State. He was also the controlling authority under Rule 50 of Drugs Rules.

1328. During the year, 31 applications for manufacture of both biological and other than biological drugs were received. Provisional licenses were granted to the manufacturers after their complying with the requirements of the rules. For some of them sufficient time had been allowed to equip and man their laboratories.

1329. During the year, two prosecutions have been instituted for contravention of section 18 a (1) and 18 (c) of the Drugs Act.

(ii) Medical Services.

Number of Medical Institutions.

1330. There were 887 Allopathic Hospitals and Dispensaries in the enlarged State of Mysore at the end of the year 1957 as against 776 at the end of the year 1956.

1331. Accordingly, the average population served by each Medical Institution was 21, 873·1 (25,002) and the average area served by each Medical Institution was 83·7 (95·7) sq. miles.